

Amendment to the Claims:

Please amend the section heading at the top of page 17, as follows:

WHAT IS CLAIMED IS: ~~Claims~~

The following listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A method for control of data flow in a packet data transmission system based on filtering and performing actions on packets ~~flowing~~ transmitted through a network, according to predetermined packet processing rules, ~~for example based on their source or destination address or packet type, both for the input packets as well as the output packets of system nodes, during which packets are encapsulated with additional fields so that a packet stream can be obtained at the system output,~~ characterized in that to the data processing system comprising a network of nodes ~~in the form of~~ including input nodes (IN1 - INn), output nodes (OUT1 - OUTn) and intermediate nodes, ~~such as~~ including data processing nodes (PROC1 - PROCn) or multiplexers (MUX1 - MUXo), ~~where the nodes are connected in a user-defined structure, the data is supplied to the input nodes (IN1 - INn) of the system, and from the data packets read from these nodes (IN1 - INn) transmission units are formed, and each of the nodes is assigned input and output rules as well as general rules (R) and whenever a packet is available at the node input (PROC1 - PROCn, MUX1 - MUXo, OUT1 - OUTn), a check is made whether the general rules apply to a given unit, and in case of a positive result of this check, the commands, determined by these rules, are executed, and then a check is made whether the input rules of the given node apply to a given unit and if they do, the commands, determined by these rules, are executed and then the node (IN1 - INn, PROC1 - PROCn, MUX1 - MUXo, OUT1 - OUTn) functions are preformed and a check is made whether the output rules apply to a given unit and in case of a positive result of this check, the commands, determined by these rules, are executed, and then in the output nodes (OUT1 - OUTn), the packets are extracted from transmission units, which are created by adding a label field, a type field and/or a size field to the packet and, when a rule is a conversion rule, a check is made whether a given conversion~~

algorithm requires additional rules being present and if it does and the additional rules are not present, the packet is rejected and the packets to which the rule applies are defined by specifying their label, type, size or similar parameters.

Claim 2 (currently amended): [[A]] The method according to claim 1, characterized in that in the input nodes (IN1 - INn) the transmission units are assigned labels, which identify the input node (IN1 - INn), which a given unit originates from.

Claim 3 (currently amended) [[A]] The method according to claim 1, characterized in that the rules define a command assigning labels to a transmission unit and/or the rules define a filtering command, the filtering being achieved by replacing packets of given transmission units with empty packets.

Claim 4 (cancelled)

Claim 5 (currently amended): [[A]] The method according to claim 1, characterized in that the rules define a transmission unit range filtering command, the filtering being achieved by replacing packets of transmission units within a given range with empty packets and/or the rules define a command for replacing identification fields of packets in units, the command being implemented by replacing values in given fields with different ones.

Claim 6 (cancelled)

Claim 7 (currently amended): [[A]] The method according to claim 1, characterized in that the rules define a keep-units command, the keeping being achieved by passing on only certain transmission units and replacing packets in the remaining transmission units with empty packets and/or by passing on only certain range of transmission units and replacing packets in the remaining transmission units with empty packets.

Claim 8 (cancelled)

Claim 9 (currently amended): [[A]] The method according to claim 1, characterized in that the rules define a skip-units command, the skipping being achieved by passing on only certain transmission units and deleting the remaining transmission units and/or by passing on only certain range of transmission units and deleting the remaining transmission units.

Claim 10 (cancelled)

Claim 11 (currently amended): [[A]] The method according to claim 1, characterized in that the rules define an assign command, the command being implemented by assigning a defined value to a predetermined packet identification field in all packets that the rule applies to and which comprise the identification field and/or the rules define a conversion command, the command being implemented by conversion of packets of transmission units from a given format to another predetermined format.

Claims 12-13 (cancelled)

Claim 14 (new): A method for control of data flow in a packet data transmission system provided with nodes having node-specific functions, the method comprising the steps of:

- encapsulating packet data into transmission units at input nodes;

- assigning rules to each node, the rules defining additional functions to be performed by the node and being one of general rules applying to all transmission units processed in the node, input rules applying to transmission units incoming at a specific input of the node and output rules applying to transmission units outgoing from a specific output of the node;

- processing data in each node by performing sequentially the functions defined by general rules, the functions defined by the input rules, the node-specific functions and the functions defined by the output rules; and

- decapsulating transmission units into packet data at the output nodes.

Claim 15 (new): The method according to claim 1, wherein additionally a label is assigned to each transmission unit while encapsulating, the label identifying the input node, from which the transmission unit originates.

Claim 16 (new): The method according to claim 1, wherein the rules define a label command, which causes assigning a label to each transmission unit.

Claim 17 (new): The method according to claim 1, wherein the rules define a filter command, which causes replacing specific data packets in the transmission units with empty data packets.

Claim 18 (new): The method according to claim 1, wherein the rules define a remap command, which causes remapping of specific values in a specific field within data packets in the transmission units.

Claim 19 (new): The method according to claim 1, wherein the rules define a keep command, which causes passing transmission units with data packets having specific values of a specific field, and replacing data packets of all other transmission units with empty data packets.

Claim 20 (new): The method according to claim 1, wherein the rules define a skip command, which causes passing transmission units with data packets having specific values of a specific field, and removing all other transmission units.

Claim 21 (new): The method according to claim 1, wherein the rules define an assign command, which causes setting a specific field of packets in transmission units to a specific value.

Claim 22 (new): The method according to claim 1, wherein the rules define a convert command, which causes converting a format of chosen packets in transmission units.

Claim 23 (new): The method according to claim 9, further comprising the steps of:

- checking if in the nodes exist a specific conversion algorithm and further rules required for conversion of the chosen data packets, the checking made prior to converting the format of the chosen data packets in the transmission units;

- executing the specific conversion algorithm if the specific conversion algorithm and further rules required for conversion of the chosen data packets exist in the nodes; and

- rejecting the transmission unit if no specific conversion algorithm and further rules required for conversion of the chosen data packets exist in the nodes.

Claim 24 (new): A device for data flow control in a packet data transmission system, the device comprising:

input nodes, having node-specific functions related to encapsulating incoming data packets into transmission units;

intermediate nodes, having node-specific functions related to processing transmission units, whose inputs are connected to the outputs of the input nodes or other intermediate nodes;

output nodes, having node-specific functions related to decapsulating transmission units into outgoing data packets, whose inputs are connected to the outputs of the input nodes or intermediate nodes,

wherein the input nodes, the intermediate nodes and the output nodes have assigned rules, the rules defining additional functions to be performed by the input nodes, the intermediate nodes and the output nodes and being one of general rules applying to all transmission units processed in the node, input rules applying to transmission units incoming at a specific input of the node, and output rules applying to transmission units outgoing from a specific output of the node, and wherein the priority of performing node-specific and rule-defined functions while processing data incoming to each node is defined in the following order, starting from the highest priority: functions defined by general rules, functions defined by input rules, node-specific functions and functions defined by output rules.

Claim 25 (new): The device according to claim 24, wherein the intermediate nodes are data processing nodes and multiplexers.

Claim 26 (new): The device according to claim 24, wherein each of the transmission units consists of a header and a data packet, and the header comprises a label, defining the input node, from which a given transmission unit originates.

AMENDMENT TO DRAWINGS

Please replace sheets 2, 4-6, 8, and 9 by the “Replacement Sheets” enclosed. The changes made to the drawings are shown in the “Annotated Marked-up Drawings” enclosed herewith.